Survey questions addressed two major themes in quality-of-care: staff preparedness to provide trauma-response care and available resources. Non-parametric Wilcoxon rank-sum and Kruskal-Wallis tests were used to analyze differences in responses according to geographic regions and SANE presence.

Results: 315 advocates from 99 crisis centers completed the survey. Staff preparedness to provide trauma-informed care was assessed through observations of staff behaviors. Over half of respondents (53.2%), reported that they observe ED staff conveying skepticism about the patient's account of sexual assault sometimes, often, or always. 43.9% stated that they sometimes, often, or always observed ED staff pressuring survivors to complete a forensic exam or file a police report.

Advocates who indicated that a higher proportion of their cases were attended by SANEs were more likely to report higher rates of trauma-informed staff behaviors. For example, the observed rate of staff asking patients for consent at every step of the exam was significantly associated with SANE presence (P=4.0e-7).

With respect to access to resources, 66.7% of advocates reported that hospitals often or always have evidence collection kits available, 30.6% reported that resources such as transportation and housing are often or always available, and 55.3% reported that SANE nurses are often or always part of the care team. SANEs were reported to be more often available in the Southwest than other US regions (p=4.0e-3) and in urban as opposed to rural areas (p=6.0e-4).

Conclusion: This study provides an updated national context demonstrating that increased hospital preparedness is needed to elevate quality and equity in the ED care of SA patients. Consistent standards should include increased ED staff training in trauma-informed care and more robust connections with comprehensive resources. Notably, consistent support from SANEs was highly associated with trauma-informed staff behaviors and comprehensive resources. While this association likely partially reflects hospital priorities and resources that align with hiring SANEs, it is also consistent with research demonstrating the positive impact of SANEs sharing their expertise with other ED staff. Therefore, increased ED coverage by SANE nurses and opportunities for interprofessional education should be prioritized. This is particularly important to address disparities in the quality of care offered to urban versus rural SA survivors.

Survey Item		N, %	Median Likert Scale Response by Region		Median Likert Scale Response by Urban-Rural Classification		Effect of SANE Nurse Presence on Survey Item
Health professionals convey (verbally and/or nonverbally) disbelief of the patient's account of their sexual assault.	Never	47, 14.6%	Midwest	Sometimes	Urban	Sometimes	
	Rarely	89, 27.7%	Northeast	Sometimes	Rural	Sometimes	
	Sometimes	148, 46.1%	Southeast	Sometimes			
	Often	21,6.5%	Southwest	Sometimes			
	Always	2,0.6%	West	Sometimes			
	Don't Know	14, 4.4%		P-Value: 0.617		P-Value: 0.268	P-Value: 0.0007
Health professionals ask patients for consent at every step of the exam.	Never	5,1.7%	Midwest	Often	Urban	Often	
	Rarely	34.	Northeast	Often	Rural	Often	
		11.7%		Ottell	Kurai	Onten	
	Sometimes	57, 19.6%	Southeast	Often			
	Often	78, 28.7%	Southwest	Often			
	Always	82, 30.1%	West	Often			
	Don't Know	20, 7.4%		P-Value: 0.662		P-Value: 0.0650644	P-Value: 0.0000004
Health professionals pressure survivors to complete the exam or to file a police report.	Never	62, 22.9%	Midwest	Sometimes	Urban	Rarely	
	Rarely	64, 23.6%	Northeast	Rarely	Rural	Rarely	
	Sometimes	83, 30,6%	Southeast	Sometimes			
	Often	28,	Southwest	Rarely			
	Always	8,3.0%	West	Rarely			
	Don't Know	26, 9.6%		P-Value: 0.0949		P-Value: 0.58096	P-Value: 0.1214
Hospitals have evidence collection kits available.	Never	7,2,5%	Midwest	Always	Urban	Always	
	Rarely	7.2.5%	Northeast	Always	Rural	Always	
	Sometimes	32, 11.6%	Southeast	Often			
	Often	45, 16.2%	Southwest	Always/Often			
	Always	140, 50,5%	West	Always			
	Don't Know	46, 16.6%		P-Value: 0.0001		P-Value: 0.621	P-Value: 0.00001
Hospitals have	Never	25,9.0%	Midwest	Sometimes	Urban	Sometimes	
resources, to address survivors' basic needs after discharge,	Rarely	58, 20.9%	Northeast	Sometimes	Rural	Sometimes	
	Sometimes	76, 27.3%	Southeast	Sometimes			
	Often	52, 18.7%	Southwest	Rarely			
	Always	33, 11.9%	West	Often			
	Don't Know	34, 12.2%		P-Value: 0.013		P-Value: 0.016	P-Value: 0.001
SANE nurses are	Never	8, 2.9%	Midwest	Often	Urban	Often	
part of the patient care team.	Rarely	24, 8.7%	Northeast	Often	Rural	Sometimes	
	Sometimes	53, 19.1%	Southeast	Often			
	Often	65, 23.5%	Southwest	Always			
	Always	88, 31.8%	West	Often			
	Don't Know	39, 14.1%		P-Value: 0.001		P-Value: 0.00005	

Table 1: Selected Indicators of Hospital Preparedness

No, authors do not have interests to disclose

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Epidemiology and Outcomes of Out-of-Hospital Cardiac Arrest Patients in Flint, MI



Kenerson R, Cranford J, Reece R/Michigan State University College of Human Medicine, Flint, Michigan, US

Introduction: The American Heart Association indicated that roughly 350,000 adults in the United States suffered an out-of-hospital cardiac arrest (OHCA) in 2015. Michigan health data showed that rates of cardiovascular disease and other medical comorbidities in the state are higher compared to the US population, and higher still in Genesee County compared to Michigan's population. Information from an OHCA registry identified a hospital within Genesee County as below average for survival when compared nationally and within the State. Identifying risk factors and common trends predicting poor outcomes among Genesee County OHCA patients can inform interventions to improve survival with good neurologic outcomes.

Methods: We conducted a retrospective chart review study at a single, urban, level 1 trauma center. IRB approval was obtained to collect and analyze adult non-traumatic OHCA patients identified from January 2015 through December 2019. Patient demographics and EMS system factors were collected, in addition to survival and neurological outcomes. Our data were analyzed using descriptive statistics, and bivariate and multivariable analysis were used to examine relationships between demographic and clinical variables and patient outcomes.

Results: 661 OHCA patients were identified by the medical records department. 68 records were excluded as most were found to be related to a traumatic event or the arrest occurred during an interfacility transfer, yielding a final sample size of 593. Results showed that 61.4% of cases were male, the mean (standard deviation) age was 60.7 (15.8), 55.1% were white, and 37.6% were black. There was an abundance of comorbidities in our patients as well: 53.3% with hypertension, 28.2% with diabetes, 34.4% used tobacco products, 11.3% had history of alcohol use disorder, and 14.5% with substance use disorder. We found that 8.4% of cases were related to overdose. In addition, 41.1% of cases had no documentation from out-of-hospital providers, 24.6% had a short out-of-hospital record, and 33.9% had a full out-of-hospital record. From this data we found that 20.9% of our patients received bystander CPR and 39.6% of arrests were witnessed. A shockable cardiac rhythm was found in 18.7% of patients. An AED was applied in the out-of-hospital setting to 29.8% of patients. In terms of patient outcomes, 12.8% survived, 46.5% died in the ED, and 40.6% died after the ED. 7.3% were discharged with a good neurological outcome. We found 14.3% of our cases met the definition of an Utstein arrest patient (witnessed, shockable arrest). Of those, 23.1% were discharged with a good neurological outcome compared to 5.0% of the non-Utstein patients, p<.001. Witnessed arrests, bystander CPR use, and AED application were statistically significantly associated with improved neurological outcomes.

Conclusion: Results support that, in Flint, MI, witnessed cardiac arrests with early bystander CPR coupled with having a treated shockable cardiac rhythm improves survival with good neurological outcomes. Therefore, layperson CPR/AED training becomes paramount in achieving this outcome. There was also an abundance of comorbid conditions in our study. Controlling chronic health conditions and curbing unhealthy habits such as tobacco abuse can decrease the overall cardiac arrest rate as well. Encouraging widespread OHCA registry use with the EMS and Hospital stakeholders can improve health outcomes by targeting interventions that have the biggest impact.

No, authors do not have interests to disclose

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EMS Operational Adaptations to the COVID-19 Pandemic



Raavicharla S, Dhir K, Louka A/Virginia Commonwealth University School of Medicine, Richmond, Virginia, US

Study Objectives: The COVID-19 pandemic presented new and unique challenges to EMS agencies. In the absence of a unified strategy to address COVID-19, agencies across the country made changes to routine operations to ensure provider and patient safety while providing life-saving care. We conducted a survey of EMS agencies in the United States to assess adaptations made in response to COVID-19.

Methods: A convenience sample of EMS agency leaders were provided a link to an IRB-approved survey by e-mail and/or social network. Survey results from responding agencies were analyzed using Microsoft Excel software.

Results: Twelve survey responses were received representing agencies across six states (TX, MO, PA, WA, VA, NC). All respondents began using dispatch screening questions to identify patients with a potential COVID-19 infection. EMS call volume